

connect means for connecting said load in circuit with said series-combination; and

feedback means connected in circuit with said series-combination and operative to cause said inverter to self-oscillate at a frequency higher than said natural resonance frequency.

128. In an arrangement for powering a load, said arrangement comprising a self-oscillating inverter adapted to provide an AC voltage across a pair of output terminals, the improvement comprising:

a resonance circuit comprising an inductor and a capacitor connected with said pair of output terminals, said resonance circuit having a natural resonance frequency;

connect means for connecting said load with said resonance circuit; and

feedback means connected with said resonance circuit and operative to cause said inverter to self-oscillate at a frequency higher than said natural resonance frequency.

CONCLUDING REMARKS

Based on the arguments and amendments provided hereinabove, Applicant believes that all the claims as presently constituted are allowable over the cited art.

From Examiner's response and the various references cited, it has become clear to Applicant that one of the main patentable aspects of subject application relates to the important and basic proposition of having a self-oscillating inverter loaded with a resonant circuit, yet at the same time making this inverter self-oscillate at a frequency that is different from the natural resonance frequency of that resonance circuit.

Of course, the expected result of a self-oscillating inverter loaded by way of a resonant circuit, and especially where the positive feedback is obtained by way of this resonant circuit, is that the frequency of oscillation is equal to the natural resonance frequency of that resonant circuit.

Applicant contends that to accomplish the clearly unexpected result of having a self-oscillating inverter loaded with a resonance circuit, yet self-oscillating at a frequency different from the natural resonance frequency of this resonance circuit, is indeed non-obvious -- both in terms of motivation as well as in terms of implementation.

In order to make a self-oscillating inverter oscillate at a frequency different from that of the natural resonance frequency of its resonant load means, it is necessary to provide for some sort of auxiliary timing means -- a timing means that acts to modify the natural timing associated with this resonant load means. In Applicant's circuit, this auxiliary timing means is provided in the form of the saturable feedback transformers, 47 and 49 in Fig. 2. These two saturable feedback transformers saturate in a time period that is shorter than the natural time period of the resonant load means; which, as a result, provides for an overall inverter oscillating cycle that is shorter than it would have been with an ordinary linear (i.e., non-saturating) feedback means.

Applicant has enclosed a check in the amount of \$5.00 (Check #494) to cover the cost of the additional dependent claim.

To the extent that there is patentable subject matter disclosed in the application, and to the extent it is not covered by allowed or allowable claims, Examiner is requested -- in accordance with paragraph 707.07(j) in the Manual of Patent Examining Procedure -- to draft for Applicant a set of allowable claims covering such unclaimed allowable subject matter.



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Date: 5-25-84

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